

ABSTRACT

An invention directed to the partial or whole disassembly of products. An article includes a first and second portion fastened together by a releasable fastener device. The releasable fastener device includes shape memory material and is in the form of a female element threadedly engaged with a complementary male element through a first threaded engagement region of the shape memory material provided on one of the elements and a second threaded engagement region provided on the other element. The releasable fastener device is operative upon shape transition to change the cross-sectional shape of the first threaded engagement region to radially move the first threaded engagement region clear of the second threaded engagement region so as to release the threaded engagement between the male and female elements and leave the male element free to withdraw from the female element without having to be unscrewed therefrom.

Patent 4,466,660